

# MEMORANDUM

To:	Laura Whelan Dorn-Platz & Company	Date:	March 30, 2006
From:	Sarah Drobis, P.E. <i>Sarah Drobis</i> Linscott, Law & Greenspan, Engineers	LLG Ref:	1-043514-1 Lincoln Crossing Project
Subject:	Shared Parking Analysis Fitness Center Site		

As requested, Linscott, Law & Greenspan, Engineers (LLG) has prepared this revised shared parking analysis for the Fitness Center Site of the proposed Lincoln Crossing project. This revised parking analysis is needed to reflect changes to the proposed project description.

The Fitness Center Site is located east of Lincoln Avenue, between Woodbury Road and Acacia Street. A parking permit was issued for the previously approved project, which included a 37,000 square-foot 24-Hour Fitness facility, 18,400 square feet of retail floor area and seven residential apartment dwelling units, along with a total parking supply of 249 spaces. We understand that the project description has been modified to include two additional dwelling units and a restaurant use with 1,223 square feet of building floor area. The modified site plan includes a total parking supply of 246 spaces (i.e., three fewer spaces than the previously approved project).

The current Fitness Center Site consists of the development of a 37,000 square-foot 24-Hour Fitness facility, 17,208 square feet of retail floor area, 1,223 square feet of restaurant floor area, and nine residential apartment dwelling units. A total of 246 parking spaces is planned to be provided on the Fitness Center Site in above ground and subterranean parking levels.

Briefly, it is concluded that the proposed parking supply is forecast to satisfy the peak parking demand. The peak shared parking demand of the Fitness Center Site is 246 parking spaces. With recognition of the shared parking concept that reflects changes in parking demand over time for different land uses and adjustments to account for walk-in and transit patronage, the parking supply is anticipated to accommodate the peak parking demand for the Fitness Center Site. Parking demand management measures, including a parking monitoring program and a Transportation Demand Management program, are recommended to encourage ridesharing and the use of alternative transportation modes (e.g., walking, bicycling, transit, etc.), which would lessen the peak parking demand for the project.

**LINSCOTT  
LAW &  
GREENSPAN**

**engineers**

**Engineers & Planners**  
Traffic  
Transportation  
Parking

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It is recognized that the peak parking demand for fitness centers occurs on weekdays, while the parking demand during weekend conditions is significantly less. Since the peak (or highest) parking demand for the Fitness Center Site would occur on a weekday, no weekend analysis is needed.

### **Recommended Parking Measures**

Although the parking demand analysis outlined above indicates that the proposed parking supply is anticipated to meet the peak parking demand, implementation of a parking monitoring program and Transportation Demand Management (TDM) program are recommended to encourage the use of alternative transportation modes (e.g., walking, bicycling, transit, etc.) and ridesharing.

The parking monitoring program could include parking accumulation surveys on site to determine the actual peak parking demand at the site and an assessment of the parking supply to meet the peak parking demands. Should the parking monitoring program indicate a parking shortfall during peak periods (i.e., 5:00 PM on a weekday), the applicant would review alternatives to provide additional parking spaces (i.e., tandem parking, valet/assisted parking, etc.).

It is also recommended that a TDM plan be implemented. TDM includes measures that will decrease the number of vehicular trips and parking spaces required by persons traveling to the site by offering specific facilities, services and actions designed to increase the use of alternative transportation modes (e.g., walking, bicycling, transit, etc.) and ridesharing. The TDM for employees could include providing incentives to use alternative modes of transportation such as providing transit subsidies, travel information kiosks and displays situated in common areas, working with project site tenants to produce and distribute alternative travel mode and rideshare opportunities information to employees, providing bicycle parking spaces and/or racks, providing preferential parking for employee car/vanpools, etc. These TDM strategies will provide opportunities to reduce parking demand and automobile dependency, as well as to promote alternative travel modes.

### Code Parking Requirement

The County of Los Angeles Municipal Code (County Code) parking rates applicable to the project are as follows:

- Apartment component: 1.5 covered spaces plus  
0.5 uncovered parking spaces per dwelling unit
- Retail component: 1.0 parking space for every 250 square feet
- Fitness Center component: 1.0 parking space per three occupants  
(as determined by the County Department of  
Building and Safety)
- Restaurant component: 1.0 parking space per three occupants  
(as determined by the County Department of  
Building and Safety)

The occupant load for each individual area within the restaurant use (i.e., kitchen, dining area, etc.) was reviewed and approved by the County Department of Building and Safety. For purposes of determining parking requirements for the proposed restaurant use, an occupant load of 30 people has been identified. A copy of the approved occupant load for the restaurant use is attached to this memorandum as Appendix A for reference. As outlined in the approved parking permit for the site, the County Department of Building and Safety identified an occupant load of 570 people for purposes of determining parking demand for the fitness center component.

The calculated parking requirement for the Fitness Center Site using the County Code parking rates is shown in Table A. As shown, the apartment component has a requirement of 18 parking spaces; the retail component has a requirement of 69 parking spaces; the restaurant component has a requirement of 10 spaces, and the fitness center component has a requirement of 190 parking spaces. Thus, based on the County Code parking rates, a total of 287 parking spaces are required for the Fitness Center Site. Based on the comparison of the County Code requirement and the proposed parking supply of 246 spaces, a shortfall of 41 parking spaces is calculated. By comparison, the approved parking permit for the original project description allows for the reduction of 30 spaces from the County Code parking requirement for the site. The 11-space difference between the proposed and approved parking permit is primarily associated with the two additional residential dwelling units (i.e., four additional spaces required), the conversion of retail use to restaurant use (i.e., four additional spaces required), and the loss of three parking spaces to address County staff concerns regarding site access and circulation.

### Shared Parking Demand Analysis

The concept of shared parking is widely recognized within the transportation planning industry and accounts for the changes in parking demand over time for different types of land uses within a mixed-use project. Shared parking analyses are used to determine the peak parking demand for a combination of uses that might share parking spaces (i.e., fitness center, restaurant and retail uses for the project). Shared parking analyses account for hourly variations in parking demand, while the County Code parking requirements sum the peak parking demand for each use to determine the required number of parking spaces. The shared parking analysis has been prepared based on methodologies contained in *Shared Parking, 2<sup>nd</sup> Edition*, 2005 published by the Urban Land Institute (ULI).

This shared parking demand analysis takes into account the hourly variation in parking demand of the planned 24-Hour Fitness facility, retail and restaurant uses. The parking spaces for the residential component will be reserved and, thus, are assumed to be 100 percent occupied throughout the day. As in the approved parking permit, the hourly parking accumulation factors for the 24-Hour Fitness facility were based on studies conducted by LLG of existing 24-Hour Fitness facilities in Southern California. The hourly parking accumulation factors for the restaurant and retail uses were based on weekday (i.e., Monday-Thursday) hourly parking accumulation percentages provided for Shopping Center and Fast-Food Restaurant land uses outlined in Table 2-5 of *Shared Parking*.

It is important to note that the shared parking requirement alone does not account for parking reductions to reflect patrons traveling to the site via non-automobile modes of transportation (i.e., walk-in or transit). The project site is located in an area with adjacent residential neighborhoods and commercial uses that are within walking distance to the site. Transit routes are provided in the area, with stops located adjacent to the project site along Lincoln Avenue. It is conservatively estimated that approximately 10 percent of the patrons and employees of the site would walk or use existing public transit to the project from adjacent residential neighborhoods and commercial areas. Therefore, an adjustment to account for walk-in and transit patronage has been incorporated into this parking demand analysis.

The weekday shared parking analysis for the Fitness Center Site is provided in Table B. The parking demand for each individual land use (i.e., fitness center, retail, residential and restaurant) is provided in the attached Appendix B (see Appendix Tables B1-B4). As shown in Table B, the peak shared parking demand for the Fitness Center Site occurs at 5:00 PM when 246 parking spaces are needed. Thus, the parking supply of 246 spaces is anticipated to meet the peak parking demand for the Fitness Center Site.

### Findings and Conclusions

- The peak shared parking demand of the Fitness Center Site is 246 parking spaces. Thus, the parking supply of 246 spaces is anticipated to meet the peak parking demand for the Fitness Center Site.
- With recognition of the shared parking concept that reflects changes in parking demand over time for different land uses and adjustments to account for walk-in and transit patronage, the parking supply is anticipated to accommodate the peak parking demand for the Fitness Center Site.
- Implementation of parking demand management measures, including a parking monitoring program and TDM program, are recommended to encourage ridesharing and the use of alternative transportation modes (e.g., walking, bicycling, transit, etc.), which would lessen the peak parking demand for the project.

Please call to discuss any questions or comments regarding this parking analysis.

cc: Chris Johnson/Dale Brown, ONYX  
File

Table A  
COUNTY CODE PARKING REQUIREMENT  
FITNESS CENTER SITE  
Lincoln Crossing Project

03/20/2006

PROPOSED USE	SIZE	PARKING RATE [1]	PARKING REQUIREMENT
Apartment	9 DU	1.5 covered plus 0.5 uncovered spaces	18 spaces
Retail	17,208 SF	1.0 space per 250 SF	69 spaces
24-Hour Fitness	570 Occ. [2]	1.0 space per 3 occupants	190 spaces
Restaurant	30 Occ. [2]	1.0 space per 3 occupants	10 spaces
CODE PARKING REQUIREMENT			287 spaces

[1] Parking rates based on County of Los Angeles Municipal Code.

[2] Occupancy determined by the County of Los Angeles Department of Building and Safety for parking purposes.

**Table B**  
**WEEKDAY SHARED PARKING DEMAND ANALYSIS (1)**  
**Lincoln Crossing-Fitness Site**

Land Use	Retail	Fast-Food Restaurant	Health Club	Residential	Shared Parking Demand	Shared Parking Demand With 10% Walk-In/Transit [7]	Comparison w/ Parking Supply 246 Spaces
Size	17.3 KSF	30.0 Occupants	576.0 Occupants	9 DU			
Pkg Rate[2]	4.0 /KSF	1.0 /3 Occupants	1.0 /3 Occupants	2.00 /DU			
Gross Spaces	69 Spc.	10 Spc.	190 Spc.	18 Spc.			
	Number of Spaces [3]	Number of Spaces [4]	Number of Spaces [5]	Number of Spaces [6]			
Time of Day							
6:00 AM	2	0	58	18	78	70	176
7:00 AM	5	1	58	18	82	74	172
8:00 AM	13	2	50	18	83	75	171
9:00 AM	27	3	61	18	109	98	148
10:00 AM	43	6	61	18	128	115	131
11:00 AM	54	9	76	18	157	141	105
12:00 PM	60	10	89	18	177	159	87
1:00 PM	62	10	55	18	145	131	115
2:00 PM	60	9	48	18	135	122	124
3:00 PM	57	6	67	18	148	133	113
4:00 PM	57	6	114	18	195	176	70
5:00 PM	59	6	190	18	273	246	0
6:00 PM	59	9	168	18	254	229	17
7:00 PM	59	8	154	18	239	215	31
8:00 PM	51	6	108	18	183	165	81
9:00 PM	34	3	74	18	129	116	130
10:00 PM	20	2	51	18	91	82	164
11:00 PM	7	1	0	18	26	23	223
12:00 AM	0	0	0	18	18	16	230

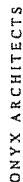
**Notes:**

- [1] Source: ULI - Urban Land Institute "Shared Parking", Second Edition, 2005.  
[2] Parking rates based on County of Los Angeles Municipal Code.  
[3] Based on shared parking demand and hourly parking accumulation percentages shown in Appendix Table B-1.  
[4] Based on shared parking demand and hourly parking accumulation percentages shown in Appendix Table B-2.  
[5] Based on shared parking demand and hourly parking accumulation percentages shown in Appendix Table B-3.  
[6] Based on shared parking demand and hourly parking accumulation percentages shown in Appendix Table B-4.  
[7] Reflects 10% walk-in/transit reduction based on a review of current transit availability, the proximity of the adjacent neighborhoods and commercial areas, the project characteristics, and the characteristics of the surrounding project area.

## **APPENDIX A**

### **OCCUPANT LOADS DETERMINED BY THE COUNTY DEPARTMENT OF BUILDING AND SAFETY**





**ERIC LLOYD WRIGHT  
& ASSOCIATES**  
**ARCHITECTURE & PLANNING**

ALTADENA  
LINCOLN CROSSING LLC.  
0 S. ORANGE GROVE BLVD  
P.O. BOX 50025  
PASADENA, CA 91115

[illegible]

ALTADENA  
L'INCHI IN CROSSING

TOLP AVE - WOODBURY RD - ACALUA ST  
ALTAMONTE, CALIFORNIA

**SITE PLAN**  
**FITNESS QUADRANT**

FORM NUMBER	FD-202
PERFORMING AGENCY	CRM 14694-N
PERIOD OF DESIGN	-
FORM CAPTION	-
DATE	-
DESIGNED BY	-
CLASSIFICATION	-
COMPLETION DATE	-

## A0.2

LEGAL DESCRIPTION

2005-2006

**APPLICANT INFORMATION**

APPLICANT NAME:  
ALTAGRANA TRUCKIN CROSSING LLC

APPLICANT ADDRESS:  
210 SOUTH ORANGE GROVE BLVD  
P.O. BOX 50025  
PASADENA, CA 91115

APPLICANT PHONE NO.: 626.204.5700

## PARKING ANALYSIS

BUILDING NO. 3

STAIRS TO UNOCCUPIED AREA = 4122 GSF  
1 STAIR TO 1ST = 34 STAIRS  
RESTAURANT = 1222 GSF  
OCCUPANT LOAD = 10 OCCUPANTS  
ESTIMATED OCCUPANTS = 10 STAIRS  
RESIDENTIAL = 8 UNITS  
2 STAIRS PER UNIT = 16 STAIRS  
TOTAL STAIRS FOR BUILDING 3 = 62

BUILDING NO. 4

FIREFIGHT CENTER = 2176 GSF  
OCCUPANT LOAD = 570 OCCUPANTS  
1 STAIR TO OCCUPANTS = 180 STAIRS

BLINDING NO.5

BUILDING \$ RETAIL = 2786 GSF  
TOTAL/1700 SF = 16.38 PPA

Product 1111 – 15,000 units

TOTAL STALLS REQUIRED = 287 STALLS

TOTAL SPACES ON SITE PROTOTYPED

STYLIS CRYSTALLIS 021

2 ACCESSIBLE STALLS (7 REQUIRED MINIMUM)  
TABLE 11B-6.311-3. COM STALLS + 2025245 TOTAL STAFFS PROVIDED ON SITE

LANDSCAPING

INDICATES LANDSCAPING PROVIDED  
SEE SHEET A-13 FOR ADDITIONAL LANDSCAPING

101 ANYA = 96,127 JF

IF 19% = VERY DANGEROUS!  
TOTAL LANDSCAPE AREA = 4.613 SF  
IF 19% = 24% = DANGEROUS!  
LANDSCAPE REPAIR = 11% = 24% = DANGEROUS!

ONLINE ONLY

BUILDINGS

ENTERED IN RELAY IS OFFICER OF THE

STRAINING STONES AND WALLS.

## PROPERTY LINES

INDICATES PROPERTY LINES

## GRADING

SEE ATTACHED DRAWING PLAN

NOTES:  
1. TEMPORARY PEDESTRIAN PROTECTION SHALL BE PROVIDED AS REQUIRED BY SECTION 1103.7

## PARKING SUMMARY

STARRS Cervixus® (40)

④ CONTACT STALLS

② 1997年12月31日

⑤ TOTAL

## SITE PLAN

1



ASSEMBLY OCCUPANT LOAD 13  
TYPE OF OCCUPANCY 30  
ASSEMBLY OCCUPANT LOAD 4-11-12-13-14-15  
BY (PRINT NAME) Alford  
SIGNATURE 2/17/06  
DATE

## **APPENDIX B**

### **WEEKDAY SHARED PARKING DEMAND WORKSHEETS**

Appendix Table B-1

**SHOPPING CENTER (TYPICAL DAYS)**  
**WEEKDAY SHARED PARKING DEMAND ANALYSIS [1]**  
**Lincoln Crossing-Fitness Site**

Month:

Land Use	Shopping Center (Typical Days)				
Size	17.2 KSF				Shared Parking Demand
Pkg Rate[2]	4.0 /KSF				
Gross Spaces	69 Spaces				
	56 Guest Spc.		13 Emp. Spc.		
Time of Day	% Of Peak [3] [4]	# Of Spaces	% Of Peak [3] [4]	# Of Spaces	
6:00 AM	1%	1	9%	1	2
7:00 AM	5%	3	14%	2	5
8:00 AM	14%	8	36%	5	13
9:00 AM	32%	18	68%	9	27
10:00 AM	59%	33	77%	10	43
11:00 AM	77%	43	86%	11	54
12:00 PM	86%	48	90%	12	60
1:00 PM	90%	50	90%	12	62
2:00 PM	86%	48	90%	12	60
3:00 PM	81%	45	90%	12	57
4:00 PM	81%	45	90%	12	57
5:00 PM	86%	48	86%	11	59
6:00 PM	86%	48	86%	11	59
7:00 PM	86%	48	86%	11	59
8:00 PM	72%	40	81%	11	51
9:00 PM	45%	25	68%	9	34
10:00 PM	27%	15	36%	5	20
11:00 PM	9%	5	14%	2	7
12:00 AM	0%	0	0%	0	0

Notes:

[1] Source: ULI - Urban Land Institute "Shared Parking", Second Edition, 2005.

[2] Parking rates based on County of Los Angeles Municipal Code.

[3] Hourly parking accumulation percentages based on Table 2-5 of the Shared Parking Manual.

[4] Percentage of peak parking demand factors reflect relationships between weekday parking demand ratios and peak parking demand ratios, as summarized in Table 2-2 of the Shared Parking Manual.

Appendix Table B-2

FAST-FOOD RESTAURANT  
WEEKDAY SHARED PARKING DEMAND ANALYSIS [1]  
Lincoln Crossing-Fitness Site

Month:

Land Use	Fast-Food Restaurant				Shared Parking Demand
Size [2]	30.0 Occupants				
Pkg Rate[3]	1.0 /3 Occupants				
Gross Spaces	10 Spaces				
	9 Guest Spc.		1 Emp. Spc.		
Time of Day	% Of Peak [4] [5]	# Of Spaces	% Of Peak [4] [5]	# Of Spaces	
6:00 AM	5%	0	15%	0	0
7:00 AM	10%	1	20%	0	1
8:00 AM	20%	2	30%	0	2
9:00 AM	30%	3	40%	0	3
10:00 AM	55%	5	75%	1	6
11:00 AM	85%	8	100%	1	9
12:00 PM	100%	9	100%	1	10
1:00 PM	100%	9	100%	1	10
2:00 PM	90%	8	95%	1	9
3:00 PM	60%	5	70%	1	6
4:00 PM	55%	5	60%	1	6
5:00 PM	60%	5	70%	1	6
6:00 PM	85%	8	90%	1	9
7:00 PM	80%	7	90%	1	8
8:00 PM	50%	5	60%	1	6
9:00 PM	30%	3	40%	0	3
10:00 PM	20%	2	30%	0	2
11:00 PM	10%	1	20%	0	1
12:00 AM	5%	0	20%	0	0

Notes:

[1] Source: ULI - Urban Land Institute "Shared Parking", Second Edition, 2005.

[2] Based on occupancy load determined for parking purposes that was reviewed and approved by the County of Los Angeles Department of Building and Safety.

[3] Parking rates based on County of Los Angeles Municipal Code.

[4] Hourly parking accumulation percentages based on Table 2-5 of the Shared Parking Manual.

[5] Percentage of peak parking demand factors reflect relationships between weekday parking demand ratios and peak parking demand ratios, as summarized in Table 2-2 of the Shared Parking Manual.

Appendix Table B-3

**HEALTH CLUB**  
**WEEKDAY SHARED PARKING DEMAND ANALYSIS [1]**  
**Lincoln Crossing-Fitness Site**

Month:

Land Use	Health Club				Shared Parking Demand
Size [2]	570.0 Occupants				
Pkg Rate[3]	1.0 /3 Occupants				
Gross Spaces	190 Spaces				
	179 Guest Spc.		11 Emp. Spc.		
Time of Day	% Of Peak [4] [5]	# Of Spaces	% Of Peak [4] [5]	# Of Spaces	
6:00 AM	31%	55	31%	3	58
7:00 AM	31%	55	31%	3	58
8:00 AM	26%	47	26%	3	50
9:00 AM	32%	57	32%	4	61
10:00 AM	32%	57	32%	4	61
11:00 AM	40%	72	40%	4	76
12:00 PM	47%	84	47%	5	89
1:00 PM	29%	52	29%	3	55
2:00 PM	25%	45	25%	3	48
3:00 PM	35%	63	35%	4	67
4:00 PM	60%	107	60%	7	114
5:00 PM	100%	179	100%	11	190
6:00 PM	88%	158	88%	10	168
7:00 PM	81%	145	81%	9	154
8:00 PM	57%	102	57%	6	108
9:00 PM	39%	70	39%	4	74
10:00 PM	27%	48	27%	3	51
11:00 PM	0%	0	0%	0	0
12:00 AM	0%	0	0%	0	0

Notes:

[1] Source: ULI - Urban Land Institute "Shared Parking", Second Edition, 2005.

[2] Based on occupancy load determined for parking purposes that was reviewed and approved by the County of Los Angeles Department of Building and Safety.

[3] Parking rates based on County of Los Angeles Municipal Code.

[4] Hourly parking accumulation percentages based on weekday hourly accumulation percentages derived from studies conducted by LLG Engineers for similar, existing 24-Hour Fitness facilities.

[5] Percentage of peak parking demand factors reflect relationships between weekday parking demand ratios and peak parking demand ratios, as summarized in Table 2-2 of the Shared Parking Manual.

Appendix Table B-4

**RESIDENTIAL**  
**WEEKDAY SHARED PARKING DEMAND ANALYSIS [1]**  
**Lincoln Crossing-Fitness Site**

Land Use	Residential				
Size	9 DU				Shared Parking Demand
Pkg Rate[2]	2.00 /DU				
Gross	18 Spaces				
Spaces	1 Guest Spc.		17 Reserved		
Time of Day	% Of Peak [3] [4]	# Of Spaces	% Of Peak [3] [4]	# Of Spaces	
6:00 AM	100%	1	100%	17	18
7:00 AM	100%	1	100%	17	18
8:00 AM	100%	1	100%	17	18
9:00 AM	100%	1	100%	17	18
10:00 AM	100%	1	100%	17	18
11:00 AM	100%	1	100%	17	18
12:00 PM	100%	1	100%	17	18
1:00 PM	100%	1	100%	17	18
2:00 PM	100%	1	100%	17	18
3:00 PM	100%	1	100%	17	18
4:00 PM	100%	1	100%	17	18
5:00 PM	100%	1	100%	17	18
6:00 PM	100%	1	100%	17	18
7:00 PM	100%	1	100%	17	18
8:00 PM	100%	1	100%	17	18
9:00 PM	100%	1	100%	17	18
10:00 PM	100%	1	100%	17	18
11:00 PM	100%	1	100%	17	18
12:00 AM	100%	1	100%	17	18

Notes:

[1] Source: ULI - Urban Land Institute "Shared Parking", Second Edition, 2005.

[2] Parking rates based on County of Los Angeles Municipal Code.

[3] Hourly parking accumulation percentages based on the assumptions that parking for residents is reserved.

[4] Percentage of peak parking demand factors reflect relationships between weekday parking demand ratios and peak parking demand ratios, as summarized in Table 2-2 of the Shared Parking Manual.